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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/007,672

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Doug Kreager

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9871

7590

10/17/2003

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EXAMINER

HE, AMY

ART UNIT

PAPER NUMBER

2858

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

CC

Office Action Summary

Application No.

10/007,672

Applicant(s)

KREAGER ET AL.

Examiner

Amy He

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 6-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 18-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 10 December 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group I claims 1-5 and 18-22 in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 6-17 have been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected Groups II and III.

Specification

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details. The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In addition, applicant is reminded that the abstract should now be only directed to the elected claims in Group I drawn to a coaxial adapter. Correction is required. See MPEP § 608.01(b).

Drawings

4. The drawings are objected to, see attached Notice of Draftsperson's Patent Drawing Reviews (PTO 948) for details. A proposed drawing correction or corrected

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drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

5. Claims 18 (line 11) is objected to it appears that the radius of the signal pin should be measured from the center to the outer surface of itself instead of from the center of the test probe to the outer surface of the test probe. Replace the two " test probe" (on line 11) with --signal pin--. Appropriate corrections are required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Schwiebert et al. (U. S. Patent No. 6, 239, 385).

Referring to claims 18-19, Schwiebert discloses a coaxial adapter (in Figure 2) comprising:

a ground sleeve (6) having a first ground sleeve end adapted to contact a ground lead of a coaxial cable and a second ground sleeve end adapter to contact a ground

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probe of a test probe, the ground sleeve being characterized by a radius (r_b) measured from the center of the ground sleeve to the inner surface of the ground sleeve;

a signal pin (5) positioned inside of and spaced apart from the ground sleeve, the signal pin having a first signal pin end adapted to contact a signal lead of a coaxial cable and a second signal pin end adapted to contact a signal probe of a test probe, the signal pin being characterized by a radius (r_a) measured from the center of the test probe to an outer surface of the test probe, and the signal pin and ground sleeve having a relative magnetic permeability (the relative magnetic permeability of the signal pin and ground sleeve dependent upon the different materials for the signal pin and the ground sleeve); and

a dielectric material (air, column 4, line 50) interposed between at least part of the signal pin and at least part of the ground sleeve, the dielectric material having a relative permittivity (permittivity of the air), wherein said radius and the permeabilities are selected such that an impedance of the adapter matches an impedance of the test probe according to the conventional impedance formula as claimed (column 4, lines 40-55).

Referring to claims 20-21, Schwiebert discloses that the signal pin and the ground sleeve are tapered from one end to the other end (see Figure 2).

7. Claims 18-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Boll et al. (U. S. Patent No. 6, 229, 327).

Referring to claims 18-19, Boll discloses a coaxial adapter (in Figure 1c) comprising:

a ground sleeve (14) having a first ground sleeve end (the right end) adapted to contact a ground lead of a coaxial cable (cable under test or DUT, column 2, lines 43-46) and a second ground sleeve end (the left end) adapted to contact a ground probe of a test probe (the testing instrument, column 2, lines 46-50), the ground sleeve being characterized by a radius (r_o) measured from the center of the ground sleeve to the inner surface of the ground sleeve;

a signal pin (12) positioned inside of and spaced apart from the ground sleeve, the signal pin having a first signal pin end (the right end) adapted to contact a signal lead of a coaxial cable (cable under test or DUT, column 2, lines 43-46) and a second signal pin end (the left end) adapted to contact a signal probe of a test probe (the testing instrument, column 2, lines 46-50), the signal pin being characterized by a radius (r_i) measured from the center of the test probe to an outer surface of the test probe, and the signal pin and ground sleeve having a relative magnetic permeability (the relative magnetic permeability of the signal pin and ground sleeve dependent upon the different materials for the signal pin and the ground sleeve); and

a dielectric material (air, column 2, line 11) interposed between at least part of the signal pin and at least part of the ground sleeve, the dielectric material having a relative permittivity (permittivity of the air), wherein said radius and the permabilities are selected such that an impedance of the adapter matches an impedance of the test probe (column 2, lines 3-6) according to the conventional impedance formula as claimed.

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Referring to claims 20-21, Boll discloses that the signal pin and the ground sleeve is tapered from one end to the other end (see Figure 1c).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-5 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boll et al. (U. S. Patent No. 6, 229, 327), in view of Schwiebert et al (U. S. Patent No. 6, 239, 385).

Referring to claims 1-2 and 22, Boll discloses a coaxial adapter (in Figure 1c) comprising:

a ground sleeve (14) having a first ground sleeve end (the right end of the 14) adapted to contact a ground lead of a coaxial cable (DUT) and a second ground sleeve end (the left end of 14) adapter to contact a ground probe of a test probe (test instrument), the ground sleeve being characterized by a first outer radius (the radius of 14 at the right end) at said first ground sleeve end and a second outer radius (the radius of 14 at the left end) at said second ground sleeve end; and

a signal pin (12) positioned inside of and spaced apart from the ground sleeve(14), the signal pin having a first signal pin end (the right end of 12) adapted to contact a signal lead of a coaxial cable (DUT) and a second signal pin end (the left end of 12) adapted to contact a signal probe of a test probe (the test instrument), the signal

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pin being characterized by a first inner radius (the radius of 12 at the right end) at said first signal pin end and a second inner radius (the radius of 12 at the left end of 12) at said second signal pin end;

wherein the first outer radius is different than the second outer radius (the radius of the 14 measured from the left and the right end are different), the first inner radius is different than the second inner radius (the radius of 12 measured from the left and right end are also different).

Still referring to claims 1-2 and 22, Boll does not disclose that the ratio of the first inner radius to the first outer radius is the same as the ratio of the second inner radius to the second outer radius, or that the ratio of the two radiuses is maintained constant over a length of the coaxial adapter. Schwiebert discloses manipulating the ratio of the two radiuses in order to control the impedance through the coaxial adapter (column 4, lines 34-55). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Boll to manipulate the ratio of the two radiuses, as taught by Schwiebert, so that the ratio of the two radiuses are the same or constant over a length of the coaxial adapter, in order to ensure a smooth transition through the coaxial adapter for better matching the impedance from the coaxial adapter to the probe according to the impedance formula shown in Schwiebert.

Referring to claim 3, Boll does not specifically disclose that the ground sleeve is made of copper. However, a person of ordinary skill in the art at the time of the invention would find it obvious to modify Boll to use copper as the material for the ground sleeve, since it has been held to be within the general skill of a worker in the art

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to select a known material (copper) on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 227 F. 2d 197, 125 USPQ 416 (CCPA 1960)

Referring to claims 4-5, Boll discloses an externally threaded first ground sleeve end (see 37 in Figure 3) and externally unthreaded second ground sleeve end (see the opposite end of 37 in Figure 3).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dole (U. S. Patent No. 6, 428, 356)--Test interface for coaxial cable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (703) 305-3360. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 703-308-0750. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4900.

AH
October 1, 2003


N. Le
Supervisory Patent Examiner
Technology Center 2800